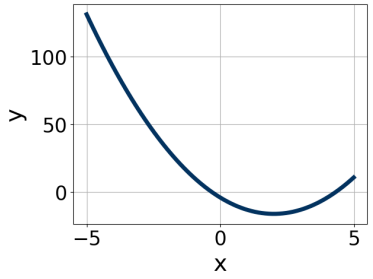
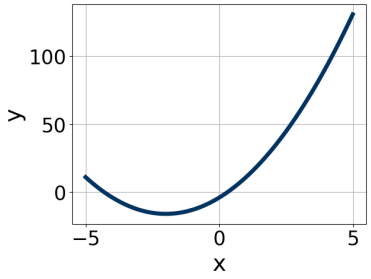
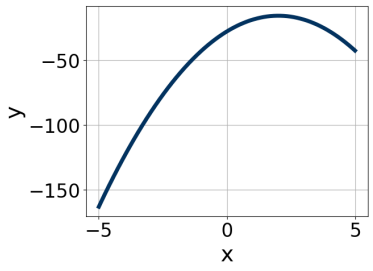
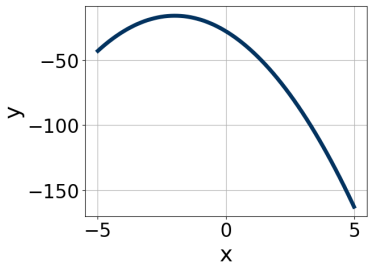
1. Graph the equation below.

$$f(x) = -(x+2)^2 - 16$$

A. 

C. 

B. 

D. 

E. None of the above.

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2. Factor the quadratic below. Then, choose the intervals that contain the constants in the form $(ax+b)(cx+d); b \leq d$.

$$36x^2 + 61x + 20$$

A. $a \in [7, 14]$, $b \in [4, 5]$, $c \in [3.26, 4.33]$, and $d \in [3, 9]$

B. $a \in [-3, 2]$, $b \in [15, 19]$, $c \in [-0.27, 1.45]$, and $d \in [41, 52]$

C. $a \in [3, 8]$, $b \in [4, 5]$, $c \in [7.89, 8.53]$, and $d \in [3, 9]$

D. $a \in [27, 29]$, $b \in [4, 5]$, $c \in [-0.27, 1.45]$, and $d \in [3, 9]$

E. None of the above.

---

3. Factor the quadratic below. Then, choose the intervals that contain the constants in the form $(ax+b)(cx+d); b \leq d$.

$$24x^2 - 10x - 25$$

A. $a \in [7.89, 8.65]$, $b \in [-8, -4]$, $c \in [1.8, 4.8]$, and $d \in [1, 6]$

B. $a \in [-1.13, 1.53]$, $b \in [-30, -28]$, $c \in [0.5, 1.7]$, and $d \in [19, 23]$

C. $a \in [2.93, 4.07]$, $b \in [-8, -4]$, $c \in [4.8, 8.9]$, and $d \in [1, 6]$

D. $a \in [1.83, 3.68]$, $b \in [-8, -4]$, $c \in [11.5, 14.6]$, and $d \in [1, 6]$

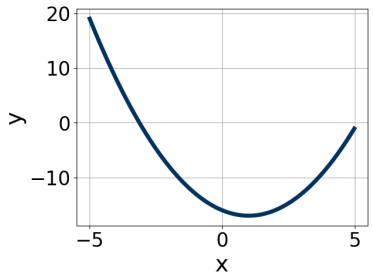
E. None of the above.

---

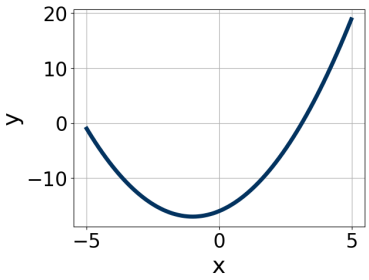
4. Graph the equation below.

$$f(x) = (x+1)^2 - 17$$

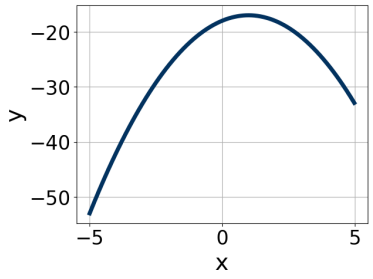
A.



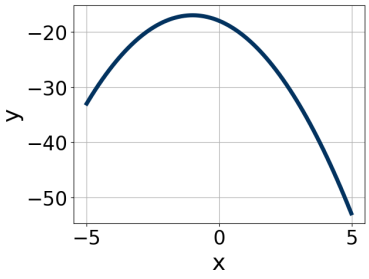
C.



B.



D.



E. None of the above.

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5. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with $x_1 \leq x_2$ (if they exist).

$$14x^2 - 11x - 8 = 0$$

A. $x_1 \in [-7.7, -6.2]$ and $x_2 \in [16.4, 19.3]$

B. $x_1 \in [-1.5, -1.1]$ and $x_2 \in [-1.2, 1.1]$

C. $x_1 \in [-0.9, -0.3]$ and $x_2 \in [0.8, 2.2]$

D. $x_1 \in [-24, -22.8]$ and $x_2 \in [24, 24.8]$

E. There are no Real solutions.

---

6. Solve the quadratic equation below. Then, choose the intervals that the solutions belong to, with $x_1 \leq x_2$ (if they exist).

$$16x^2 - 11x - 4 = 0$$

A. $x_1 \in [-20, -17.4]$ and $x_2 \in [18.69, 19.94]$

B. $x_1 \in [-4.9, -3.6]$ and $x_2 \in [14.49, 15.55]$

C. $x_1 \in [-2.4, -0.6]$ and $x_2 \in [0.04, 0.59]$

D. $x_1 \in [-0.8, 2.1]$ and $x_2 \in [0.65, 1.04]$

E. There are no Real solutions.

---

7. Solve the quadratic equation below. Then, choose the intervals that the solutions x_1 and x_2 belong to, with $x_1 \leq x_2$.

$$25x^2 - 60x + 36 = 0$$

A. $x_1 \in [0.29, 0.54]$ and $x_2 \in [3.38, 4.56]$

B. $x_1 \in [1.08, 1.81]$ and $x_2 \in [0.27, 1.73]$

C. $x_1 \in [0.51, 0.78]$ and $x_2 \in [1.98, 3.55]$

D. $x_1 \in [0.21, 0.38]$ and $x_2 \in [5.11, 7.21]$

E. $x_1 \in [29.71, 30.02]$ and $x_2 \in [29.92, 30.47]$

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8. Solve the quadratic equation below. Then, choose the intervals that the solutions x_1 and x_2 belong to, with $x_1 \leq x_2$.

$$25x^2 - 65x + 36 = 0$$

A. $x_1 \in [0.51, 0.61]$ and $x_2 \in [1.82, 3.36]$

B. $x_1 \in [0.78, 0.86]$ and $x_2 \in [1.62, 2.15]$

C. $x_1 \in [0.39, 0.46]$ and $x_2 \in [2.81, 3.66]$

D. $x_1 \in [19.95, 20.11]$ and $x_2 \in [44.95, 45.23]$

E. $x_1 \in [0.33, 0.37]$ and $x_2 \in [3.73, 4.59]$

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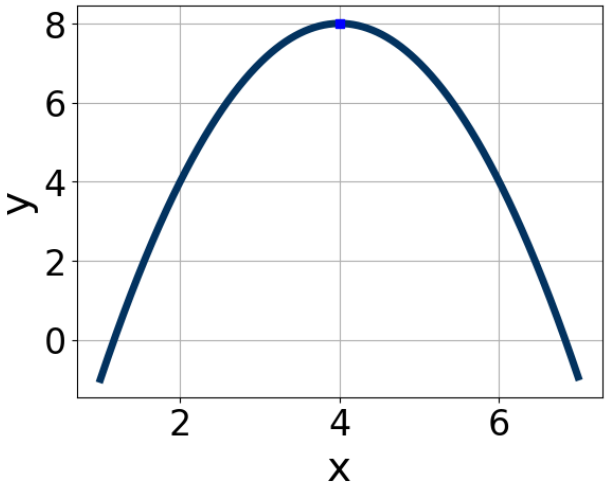
9. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a, b, and c belong to.



A. $a \in [-2, 0]$, $b \in [-12, -7]$, and $c \in [-26, -22]$

B. $a \in [0, 4]$, $b \in [-12, -7]$, and $c \in [24, 25]$

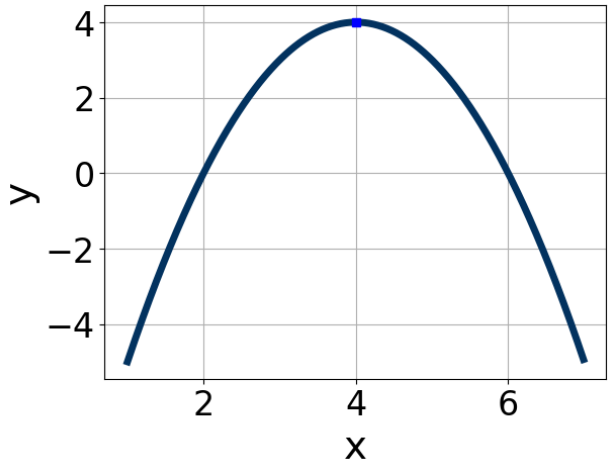
C. $a \in [-2, 0]$, $b \in [7, 9]$, and $c \in [-9, -6]$

D. $a \in [0, 4]$, $b \in [7, 9]$, and $c \in [24, 25]$

E. $a \in [-2, 0]$, $b \in [-12, -7]$, and $c \in [-9, -6]$

---

10. Write the equation of the graph presented below in the form $f(x) = ax^2 + bx + c$, assuming $a = 1$ or $a = -1$. Then, choose the intervals that a, b, and c belong to.



A. $a \in [-1.6, -0.7]$, $b \in [5, 11]$, and $c \in [-15, -11]$

B. $a \in [-1.6, -0.7]$, $b \in [-8, -7]$, and $c \in [-15, -11]$

C. $a \in [0.3, 2]$, $b \in [5, 11]$, and $c \in [18, 21]$

D. $a \in [-1.6, -0.7]$, $b \in [-8, -7]$, and $c \in [-22, -19]$

E. $a \in [0.3, 2]$, $b \in [-8, -7]$, and $c \in [18, 21]$